Attleboro

STONE & WEBSTER ENVIRONMENTAL TECHNOLOGY & SERVICES

a division of
STONE & WEBSTER ENGINEERING CORPORATION

245 SUMMER STREET, BOSTON, MASSACHUSETTS 02210

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TORONTO, CANADA

Ms. LaVonne Johnson
Site Assessment Contracts Manager
U.S. EPA Region I
Technical Support & Site Assessment
John F. Kennedy Federal Building (HBS)
Boston, Massachusetts 02203-2211

March 27, 1998
J.O. No. 05000.3027
TDD No. 9706-01-CSX
CERCLIS No. MAD 007325814
Letter No. COE-3027- 0322
Delivery Order No: 0030
Contract No.: DACW33-94-D-0007

Subject: **Trip Report**
Texas Instruments, Inc. - 34 Forest Street, Attleboro, Massachusetts

Dear LaVonne:

Attached please find a copy of the Trip Report for the Texas Instruments, Inc. site as partial fulfillment of this delivery order. If you have any comments or questions regarding this submittal, please contact me at (617) 589-5383.

Very truly yours,

Larry Cohen

Larry S. Cohen
Project Manager
Stone & Webster Environmental Technology & Services
(617) 589-5383

Attachment

cc: EPA Removal Program
Lisa White, S&W Site Manager, 617-589-2115

trip_epa.ltr

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Mr. Michael Elliott
Texas Instrument, Inc.
34 Forest Street, Mail Stop MS10-02
P.O. Box 2964
Attleboro, MA 02703-0964

March 27, 1998
J.O. No. 05000.3027
TDD No. 9706-01-CSX
CERCLIS No. MAD 007325814
Letter No. COE-3027- 0323
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Subject: **Trip Report**
Texas Instruments, Inc. - 34 Forest Street, Attleboro, Massachusetts

Dear Mr. Elliott:

In an effort to promote awareness of our activities, the Environmental Protection Agency (EPA) has asked us to forward a copy of the Trip Report outlining our activities which took place on the Texas Instruments, Inc. property, on December 10, 1997. Please contact me at (617) 589-2115 if you have any questions regarding this report.

Very truly yours,

Lisa K. White

Lisa K. White
Site Manager

Attachment

cc: Nancy Smith, US EPA Site Assessment Manager (w/o Attachment)

trip_own.ltr

EPA NEW ENGLAND SUPERFUND PROGRAM
TRIP REPORT

Inspection Information

Site Name: Texas Instruments, Inc.
Address: 34 Forest Street
Town: Attleboro **State:** MA
CERCLIS #: MAD007325814 **TDD #:** 9706-01-CSX
S&W J.O. #: 05000.3027
Date of Inspection: December 10, 1997 **Time of Inspection:** 9:00 am
Weather Conditions: Overcast, cold, high 30s/low 40s
Site Status at Time of Inspection: **(✓) ACTIVE ( ) INACTIVE**
Comments: The site is listed as a confirmed non-priority disposal site by the Massachusetts Department of Environmental Protection (MADEP).

Personnel Performing Inspection

	Names	Program
( ) EPA :		
(✓) EPA Contractor:	Lisa White Marina Deligeorges	Stone & Webster Environmental Technology & Services
( ) State :		
(✓) Other :	Michael Elliott Raymond Lizotte John Amaral Rick Derby Joe Szlachcuik	Texas Instruments, Inc.

Site Ownership-Current Owner

Name: Texas Instruments, Inc. **Phone:** (508) 236-1809
Address: 34 Forest Street
Attleboro, MA 02703

- **9:00 am** - Lisa White and Marina Deligeorges arrive at site and meet with Michael Elliott, Raymond Lizotte, John Amaral, and Joe Szlachcuik to discuss purpose of visit and site in detail.

  The Texas Instruments site (TI) is approximately 275 acres in size, 30 acres of which are paved parking areas. Approximately two-thirds of the TI property have been developed. Undeveloped portions of the site are generally wooded. There are 17 buildings on site, constructed of brick, metal and/or concrete. The average age of the buildings is 32 years.

  The TI site is essentially flat. The eastern portion of the site is approximately 135 feet above sea level. The western portion of the site is approximately 124 feet above sea level, allowing for an approximate 10 foot change in elevation across the site. Site access is unrestricted. Several public roads traverse the site. These roads are not heavily traveled, as the site is located in the north/northwest corner of the City of Attleboro, and land beyond the site is not commercially developed (mainly residences). There is a landscaped walking trail on site, as wells as two ball fields used by TI employees.

  The TI facility is a major industrial plant in southeastern Massachusetts, manufacturing clad metals, electronic control devices, semi-conductors and assorted formed-metal products. Numerous oils and hazardous materials are stored and used at the site. The site maintains over 3,000 Material Safety Data Sheets (MSDSs), and in 1993, 24 chemicals were reported under subtitle B, section 312 of SARA, Title III, "Community Right-to-Know." The chemicals include: isoparrafinic hydrocarbon, methanol, mineral oil, nitric acid, nitrogen, oxygen, potassium cyanide, potassium silver cyanide, sodium hydroxide, sulfuric acid, trichloroethylene, #2 fuel oil, #6 fuel oil, ammonia persulfate, aqua ammonia, anhydrous ammonia, calcium hydroxide, chlorine, cupric chloride, ferric chloride, ferrous sulfate, gasoline, hydrochloric acid, and hydrofluoric acid.

  TI possesses numerous permits for their manufacturing process. These permits include: NPDES, POTW (City of Attleboro for industrial wastewater discharge), air permits (approximately 350 process emissions on site), groundwater withdrawal permits (groundwater is used in plating production), backflow permits, and 5 recycling permits.

  Texas Instruments is in the Massachusetts Star Track program, in which they were designated as environmental leaders. This program allows Texas Instruments to be exempt from regulatory action until 1998. Texas Instruments began participating in the program in May/June 1996 and will continue to participate for as long as they can prove themselves as environmental leaders.

  The site straddles a hydrological divide between the Ten Mile River and the Taunton River Basins. Surface water from western side of side is diverted to the Ten Mile River Basin.

Surface water from the eastern portion of the site is diverted to the Taunton River Basin.

Building 11 is the Chemical Control Facility. All chemicals received on site are managed through this facility prior to being distributed to the appropriate manufacturing buildings. Non-toxic raw materials are sent directly to the manufacturing area. Bulk deliveries are sent directly to the bulk storage areas (i.e., tanks).

Abutting properties - the site is bordered by Augat, Inc., McDonalds, and residences to the west; residences to the north; Cooper's Pond to the east; and residences, Jasan Corporation, Ralph Shuster Metals, Inc. and property owned by the City of Attleboro to the south.

- **12:00 pm** - Begin outdoor site reconnaissance. Rick Derby joins us.

- **12:10 pm** - View groundwater treatment system. Twenty-five well points go to treatment plant, one bedrock recovery well. Two stripping towers. Effluent sampled once a week. Influent also monitored. Discharged at outfall 002. Outfall 002 also receives all surface water runoff from western portion of the site.

- **1:00 pm** - View monitoring well just past railroad tracks. Well not actually on Texas Instruments property. Well has been tampered with (top has been broken off).

- **1:10 pm** - Viewed old duck pond, where a previous TCE spill has occurred (late 1950s/early 1960s). There is an oil/water separator located near the old duck pond/groundwater treatment plant as a precaution for groundwater treatment plant. (Also, Building 4 - oil/water separator used. Cooling water for furnaces -- too hot to handle -- water runs through machines -- oil is picked up.

- **1:30 pm** - Viewed Hazardous Waste Storage Building. The facility houses waste that include flammable materials, acids, cyanides, waste barium, solid wastes, TCE, and mixed solid waste. In addition, virgin oils are also stored separately in the building, as well as numerous empty drums for recycling.

  The facility is totally enclosed and explosion-proof. Inside the building is a bottled gas storage room and a cyanide storage room. The building's ventilation system is designed to maintain a continuous movement of air within the building as well as within spill containment trenches. Five holding trenches (four 250-gallon and one 3,000-gallon) have grated tops to allow easy access for pumping and visual inspections. The spill control is designated to separate flammables, oxidizers, acids, and cyanides.

- **1:40 pm** - Viewed former sludge lagoons area. Area is now used as a ball field.

- **3:30 pm** - Site reconnaissance over.

Site Characteristics

Quantities/Extent/Details

( ) Cylinders:

(✓) Drums: Approximately 50 drums of hazardous waste were located in the Hazardous Waste Storage Building at the time of the site reconnaissance.

(✓) Lagoons: Former sludge lagoons viewed. Lagoons have been capped (1981) with 3 inches lime, 1 foot clay and 2 feet fill, loam, and grading.

(✓) Tanks: **(✓) Above ground:**
5,000-gallon Mineral Oil
275-gallon Diesel
200,000-gallon and 150,000-gallon Fuel Oil
2,000-gallon Trichloroethane
1,000-gallon Diesel
500-gallon Diesel
2-200,000-gallon (each) waste treatment equalization holding tanks
7,100-gallon ferrous sulfate
6,000-gallon Sulfuric Acid
2,000-gallon Diesel
2-2,100-gallon (each) ferric chloride holding tanks
3,000-gallon virgin ferric chloride
5,000-gallon waste ferric chloride
40,000-gallon Fuel Oil
1,000-gallon Diesel Fuel

Chlorine bulk storage tank -- has 2 alarms within building. Tank is monitored at several different places. Automatic shutoff. Annual training.

(✓) Below ground:
2,000-gallon Gasoline
1,500-gallon Methanol

( ) Asbestos:

( ) Piles:

( ) Stained Soil:

(✓) Sheens: Mineral Oil AST behind Building 4 - ramp/pit for truck to back into - typical spill containment design. Slight sheen observed on collected rainwater on top of drain. Rainwater is tested.

( ) Stressed Vegetation:

( ) Landfill: ( ) Leachate seeps

(✓) Population in Vicinity: estimate # in 1/4 mile radius 154
( ) Distance to nearest residence: Residences border the site to the west, north, northeast and northwest.
(✓) Land use: (✓) Industrial ( ) Commercial ( ) Residential
( ) Rural ( ) Agricultural
(✓) Wells: ( ) Drinking:
(✓) Monitoring: There are approximately 70 monitoring wells on site; approximately 50 overburden and approximately 20 bedrock.
(✓) Other: Production wells are located on site. The production wells are used in the manufacturing process at Texas Instruments.

On site/Off site Receptors

Comments/Details

(✓) Drinking Water ( ) Private: (✓) Municipal: The City of Attleboro pumps groundwater to surface water (Manchester Reservoir) located approximately 3 miles west of the site.
( ) Ground Water:
(✓) Unrestricted Access: Site access is unrestricted. Several public roads traverse the site. These roads are not heavily traveled, as the site is located in the north/northwest corner of the City of Attleboro, and land beyond the site is not commercially developed (mainly residences).
(✓) Population in Proximity: There are approximately 154 people within 1/4 mile of the site.
(✓) Sensitive Ecosystem: Approximately 100 acres of wetlands located on site.
( ) Other:

TRIP REPORT

Site Observations/Concerns

Comments: (vegetation, topography, containment of materials, buildings, etc.)

- The site is flat. Railroad track located on the southern border of the site is approximately 5 - 8 feet higher than the average elevation of the site.
- The equipment in the groundwater treatment plant appears to be in good condition. There was no apparent stressed vegetation in the vicinity of the treatment plant.
- There was no apparent stressed vegetation in the vicinity of the old duck pond or at the former sludge lagoons.
- The drums located in the Hazardous Waste Storage Building appear to be in good condition. Drums of waste were labeled, separated by content, and stored on appropriate containment.

The floor is pitched between each individual section. There was no evidence of spills or leaks. There are decon and emergency response supplies located along the backwall. Spill control trenches in the building have grated tops to allow for easy access to pumping and visual inspections.

- All above ground storage tanks were surrounded by aggressive containment. Some storage tank areas are fenced and/or are locked. There was no evidence of spills or leaks.

- Sheen noted on rainwater collected in ramp of mineral oil AST near Building 4 was not of major significance -- very slight.

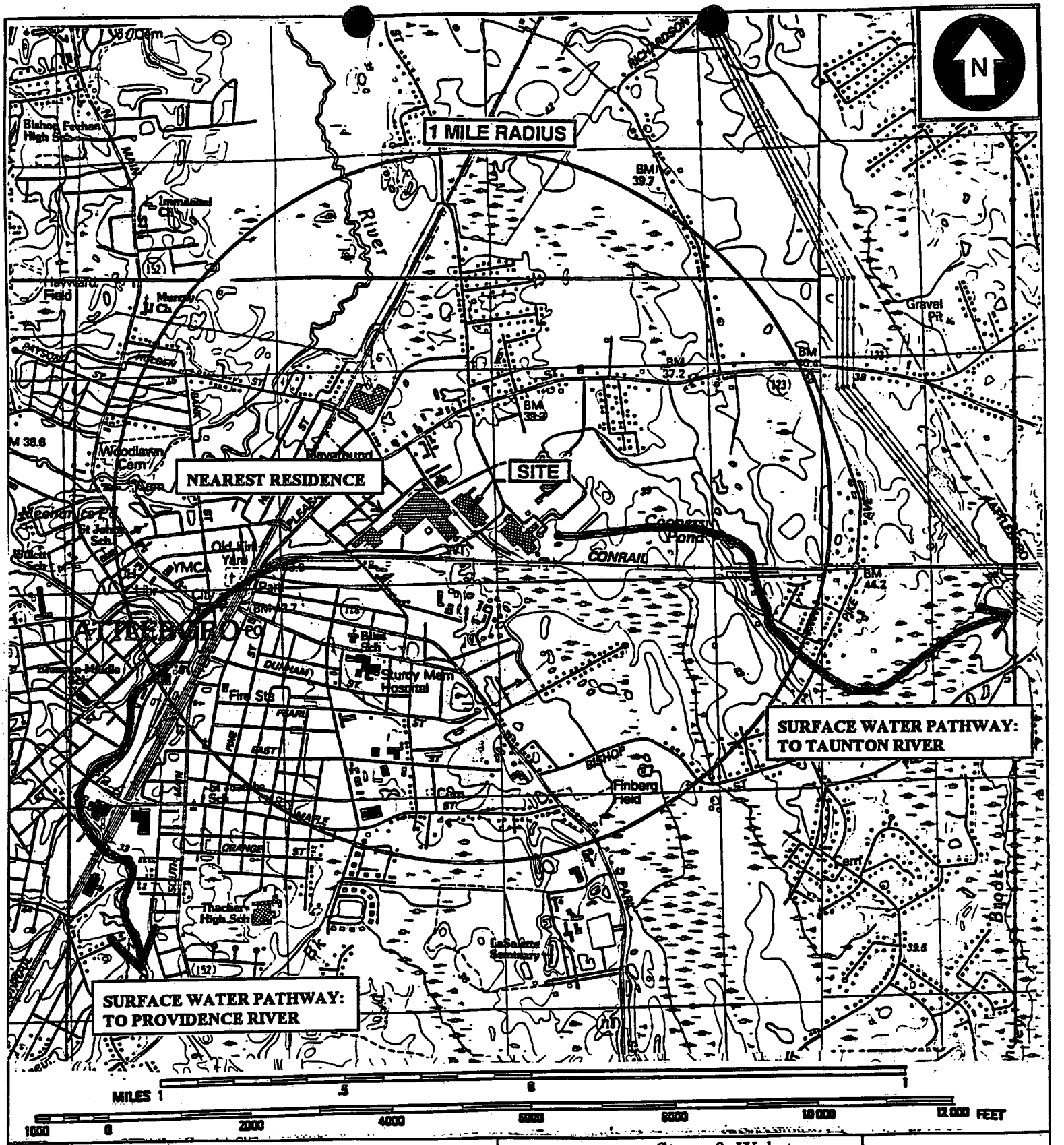
- The Chemical Control Facility consists of seven separate rooms with pitched floors whose drains are directed to 250-gallon underground spill control storage tanks.

- Bulk storage areas have two alarms within the building. The tanks are monitored at several different places and have alarms to protect against overfilling.

- Overall, Texas Instruments demonstrates good housekeeping practices.

A site plan is attached as Figure 3.

Report prepared by: Lisa White
Affiliation: Stone & Webster Environmental Technology & Services
Date: March 27, 1998

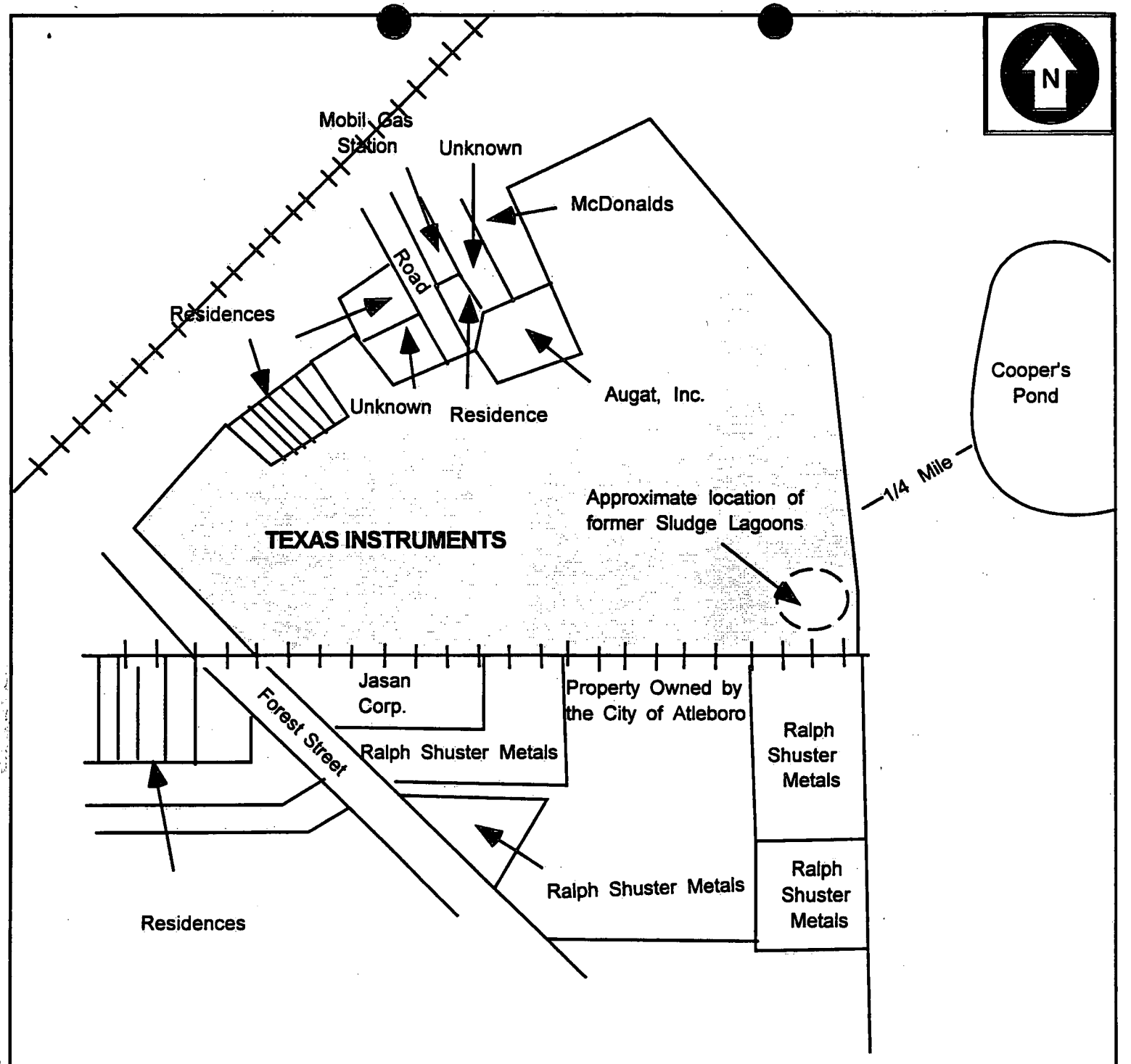


BASE MAP IS A PORTION OF ATTLEBORO (1987), AND TAUNTON (1987) MASSACHUSETTS 7.5 MINUTE SERIES USGS TOPOGRAPHIC MAPS.

Stone & Webster
Environmental Technology
and Services
Boston, Massachusetts

Date: 12/31/97
CERCLIS No.:
MAD 007325814

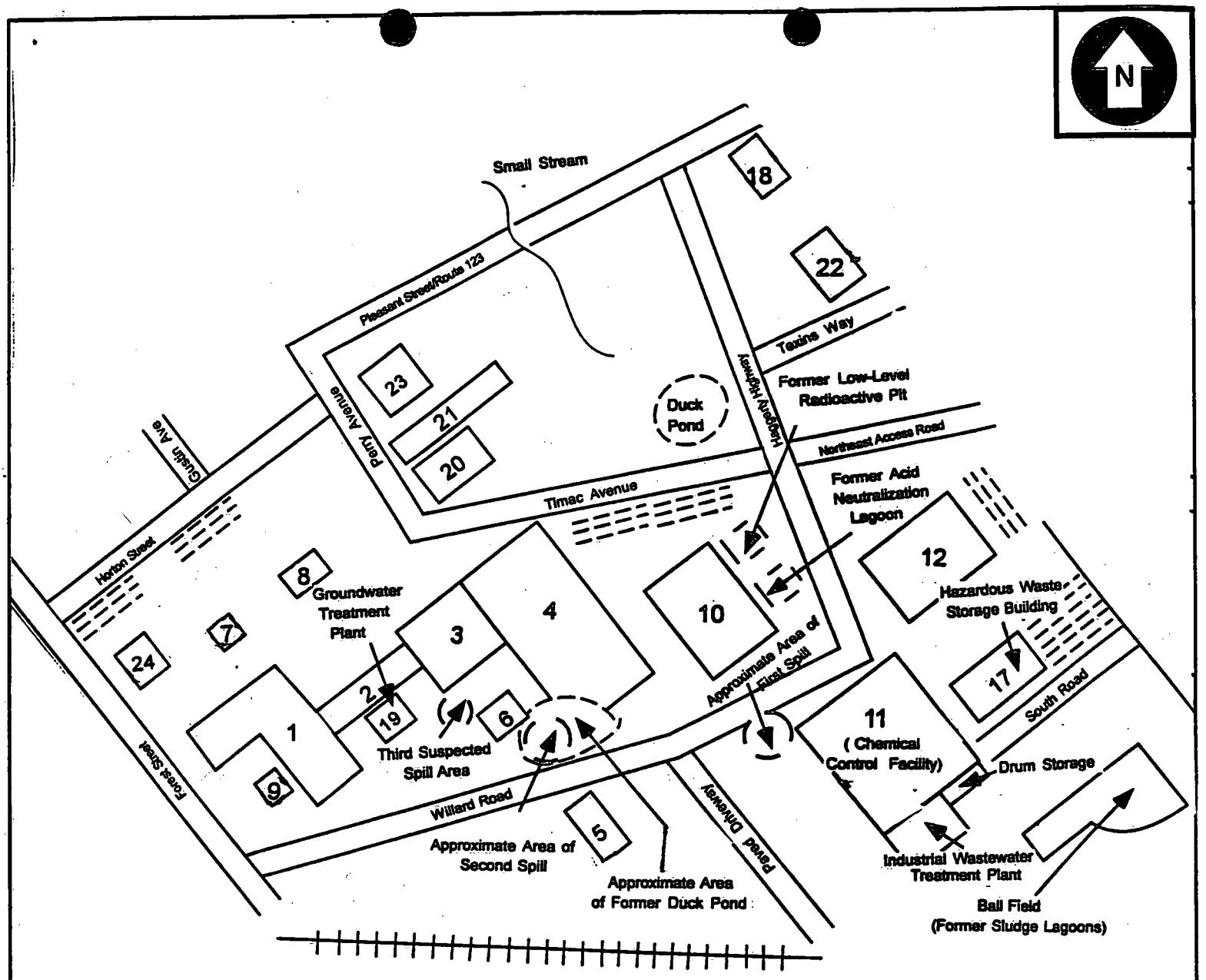
Site Location Map
TEXAS INSTRUMENTS, INC.
Figure 1



+++ Railroad Track

NOT TO SCALE

Base map is taken from the Town of Attleboro's Assessor's Maps 52, 56, and 61.	Stone & Webster Environmental Technology and Services Boston, Massachusetts	Date: 1/21/98 CERCLIS No.: MAD 007325814
	Site Vicinity Map TEXAS INSTRUMENTS, INC. Figure 2	



Legend

Railroad Tracks

Paved Parking Areas

All areas are paved unless otherwise noted.

NOT TO SCALE

MAP IS ADAPTED FROM TEXAS INSTRUMENTS, INC. MATERIALS AND CONTROLS GROUP - ENVIRONMENTAL DEPARTMENT DISASTER EMERGENCY MANAGEMENT PLAN (NOV. 1997)

Stone & Webster Environmental Technology and Services Boston, Massachusetts

Date: 12/31/97
CERCLIS No.: MAD 007325814

Site Plan
TEXAS INSTRUMENTS, INC.
Figure 3